

**Question 1 Subcommittee  
Initial Response  
For Presentation March 2, 2006**

**Members:**

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**1.0 Introduction**

On December 1, 2005 this subcommittee was formed under the DOI FACA Committee and assigned to address FACA Question 1:

*What are the best available procedures for quantifying natural resource injury on a population, habitat or ecosystem level ? What guidance is appropriate for the utilization of these procedures ?*

After the December 1, 2005 meeting, each member of the subcommittee provided brief written comments to Roger Helm who then summarized them for group review. The summary and the suite of comments from the members were the subject of subcommittee conference calls held on January 18 and 30 and February 13 and 23, 2006. Collectively, the written and verbal comments were used to draft this brief response.

**2.0 Discussion**

As we understand it, the subcommittee was charged (on December 1, 2005) with developing an outline and a timeline relative to how we would answer Question 1 (above). The subcommittee first determined that the phrasing of Question 1 was problematic (possibly stemming from an initial problem in how the regulations were drafted). For example, there is a lack of congruity among the terms population, habitat and ecosystem. Typically, the complexity of biological scale increases from individual – population – community – ecosystem. Habitat is not a level of biological scale, but is an important term in damage assessment. A quick review of 43 CFR 11 indicates that the regulations are confusing with respect to the terms population, habitat and ecosystem. Perhaps the more appropriate phraseology for Question 1 is: At what level(s) of biological scale should / could injury determination be conducted ?

Until we are able to get feedback on March 2 from the full Committee to rephrase the focus of the question, it is not prudent for us to devise a detailed plan and timeline.

Practically speaking, the experience base within the subcommittee suggests that it is rare to undertake an injury assessment at the population level or higher. This does not mean that assessments at this level are improper, only that they are not undertaken routinely in our experience. Further, despite the rebuttal presumption afforded to Trustees under the statute, provided the 43 CFR 11 guidelines are followed, the experience of our group is there are few instances where there has been strict adherence to the steps outlined therein. Clearly, one of the potential lines of investigation of the subcommittee is to review (using actual data from cases, NRDAs etc.) the level at which assessments have been undertaken, with attendant reasons, methodological approaches, outcomes, etc. The subcommittee, via one of its members, has tried to begin to gather some preliminary information in this regard, but additional support from US DOI will be required to carry it further. Part of this investigation should will also be relevant to the broader FACA committee as we seek to define the objective of injury determination in the NRD context.

In general, this subcommittee's NRDA practitioners have suggested that practicality, underpinned with current scientifically acceptable methods and approaches, may be a useful approach to improving NRDAs. This desire for practicality obviously needs to be balanced with the policy, regulatory and scientific needs for injury determination in the NRD context; namely, to insure that the public is compensated for the services injured spatially and temporally as a result of the release of hazardous substances or oil.

Although there are a number of tools for higher-level assessments, their application outside of a resource management paradigm (setting of hunting or fishing limits) appears to be limited. It is important to recognize that the time and effort involved with applying higher level assessments to NRDAs might not be consistent with the intent of NRDAs, as a general policy matter and/or in a site-specific situation, especially at the potential "cost" of prolonging the study period and delaying settlements. In addition, these higher level assessments may provide "noisy data", and are unlikely to provide less than clear, definitive results on which to estimate injury and subsequent service losses. Nevertheless, there appears to be consensus among the subcommittee that it will be important to discuss these tools in the context of their strengths and weaknesses so that any potential revisions to the guidelines include the full suite of tools that could be applied – should they be necessary and/or favored in certain site-specific contexts. In so doing, our purpose is not to indicate a preference for one tool over another, but to provide the information necessary for practitioners to understand which tools may be more (or less) useful in a particular situation

compared to another tool. In the near term, the subcommittee has drafted a simple matrix table (Table 1) that illustrates when and where these tools could be applied – and when and where they should probably not be applied – in response to the second part of Question 1.

With respect to other frameworks and approaches that might be useful in the context of NRDA, one suggestion is to explore the tenets of ecological risk assessment (ERA) for application to NRDA. In many respects, much of the data collected for the ERA is the same as that which will be used for the NRDA. However, it is recognized that the output of these two approaches differ. The output of the ERA is an estimate of risk, coupled with a discussion of the uncertainties in the assessment and the data. The output of the NRDA is an estimate of injury and service loss, which are then translated into a damage claim that is usually resolved through restoration.

The approach to ERA has been subjected to significant peer review, national debate, and practice revisions over the past 10 years. Taking these lessons learned, and the improvements to the science, using an ERA-like approach may be one way to improve NRDA, provided some of the issues concerning uncertainty can be adequately addressed. Uncertainty can be addressed in the ERA context by acquiring additional data, making conservative risk management decisions, or monitoring the results of the decision and making adaptive management decisions, as necessary, in the future. Similarly, these approaches could be applied to a NRDA, where uncertainty could for example be addressed by determining the injured resource's service losses in terms of a range rather than a single value. Following this approach, selecting and implementing a restoration project(s) that compensate for losses at the high end of the injury range could satisfy concerns about scaling and adequate compensation, thereby removing one obstacle that is often a major impediment to settling NRD claims. Addressing uncertainty in this fashion will likely be case by case and may require substantial discourse between the Trustees, the responsible party, and the public before implementation.

### **3.0 Suggestions for Next Steps**

- a. The subcommittee believes that the best approach to responding to Question 1 is to document the general approaches and practical steps that have been taken in NRDA in the past 5 years. These steps can be described in a way that parallels 43 CFR 11, yet makes clear that flexibility and creativity can produce cost-effective solutions that may be appropriate for specific sites and situations. US DOI assistance in helping us amass this database (and/or providing applicable documentation from its files) will be needed.
- b. Members of the subcommittee knowledgeable in higher level biological investigations will prepare an initial draft of a matrix table with the various

higher-level approaches that can be applied to NRDA, including their strengths and weaknesses. This matrix table will be useful in discussions between the subcommittee and the larger committee. Of note is a US EPA Science Advisory Board (SAB) workshop held on February 7-8, 2006 where a similar question was debated regarding the merits / needs / utility of conducting ERAs at higher biological scales. The results of this SAB workshop should be available within the next 2-3 months.

- c. There is a need for the subcommittee to further explore ways to address uncertainty in the context of NRDAs. Addressing uncertainty will require a balance between conservatism, protection of the public's interest, and the desire to streamline the NRDA study and settlement timeline. Agreement on suitable terminology to describe the approach(es) will be a key element in this discussion.
- d. There is merit in exploring whether the approach to ERA can be modified to accommodate the needs of NRDA. The subcommittee would benefit from more discussion on this point before we can determine if additional resources will be necessary for us to reach consensus. Presentations to the subcommittee from ERA practitioners would be useful.
- e. There are numerous questions that have been raised by members of this subcommittee and we have yet to have sufficient time to discuss them and reach either partial or full agreement on solutions. These questions will be addressed as the subcommittee works on its charge.